

wereldwijde
wiskundewedstrijd
W4Kangoeroe

www.w4kangoeroe.nl

March 21st 2013



**Good luck and most of
all have fun.**

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calculators are not
allowed



you may use
50 minutes



scribbling paper is
allowed



results and prizes will
arrive at school in May



answers will be posted
on the website March
28th

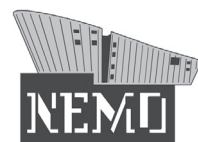


solutions will be
posted on the website
April 19th

wizKID
groep 5 & 6 primary school

zwijzen

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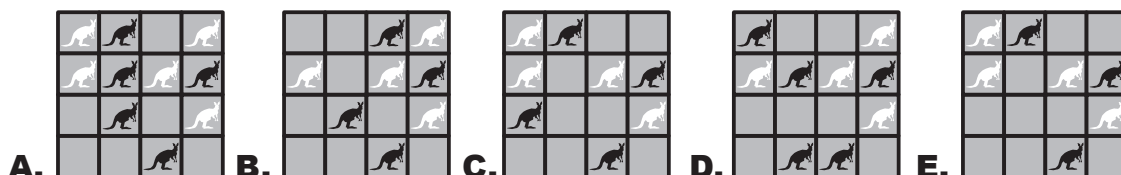


www.cito.nl



www.museumboerhaave.nl

1. In which figure do you see more black kangaroos than white kangaroos?



2. In an arithmetic book is this stained sum: $4 \text{ (stain)} + 5 \text{ (stain)} = 104$.
Underneath each stain is the same digit.
Which digit?

- A. 2 B. 4 C. 5 D. 7 E. 8

3. How will this sequence of circles continue?

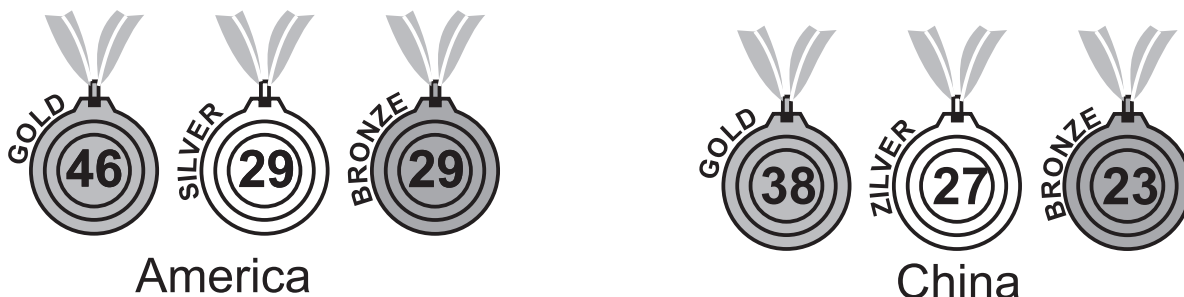


- A. 1 grey, 1 white, 2 grey, 2 white
B. 1 white, 1 grey, 2 white, 2 grey
C. 1 white, 1 grey, 2 white, 2 grey
D. 1 grey, 1 white, 2 white, 2 grey
E. 1 white, 1 white, 2 white, 2 white

4. Charles has 24 sweets.
He gives all his sweets to his friends. Everyone gets the same amount of sweets.
How many friends can Charles *not* have?

- A. 2 B. 3 C. 4 D. 5 E. 6

5. 2012 Olympic Games medals in London.



How many more medals than China did America win?

- A. 6 B. 14 C. 16 D. 24 E. 26

6. Vera's mum is preparing toasted sandwiches. For one toasted sandwich you need two slices of bread. One whole loaf of bread has 24 slices.
How many toasted sandwiches can she prepare with two and a half loafs of bread?

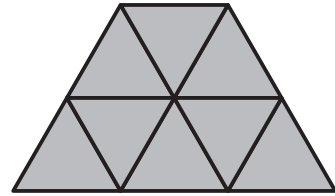
- A. 24 B. 26 C. 30 D. 34 E. 48

7. About the number 325 five children state the following:

- Alex: 'This is a three-digit number'.
Dana: 'All digits are different'.
Eve: 'When I add the digits, I will get 10'.
Fred: 'The digit at the position of the units is 5'.
Charles: 'All digits are odd'.
Who of the children is wrong?

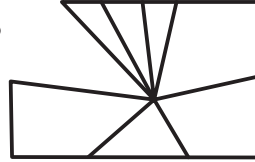
- A. Alex B. Dana C. Eve D. Fred E. Charles

8. How many triangles can be found in the drawing?



- A. 9 B. 10 C. 11 D. 12 E. 13

9. The mirror is broken.
Which piece is missing in the drawing?



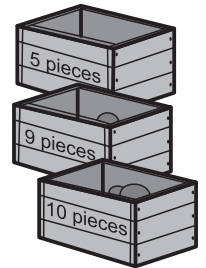
- A. B. C. D. E.

10. *Pinocchio's* nose is 9 cm long.
When *Pinocchio* lies, his nose grows 6 cm.
When he speaks the truth, his nose shrinks 2 cm.
He lies three times and he speaks the truth twice.
How long will *Pinocchio's* nose be now?



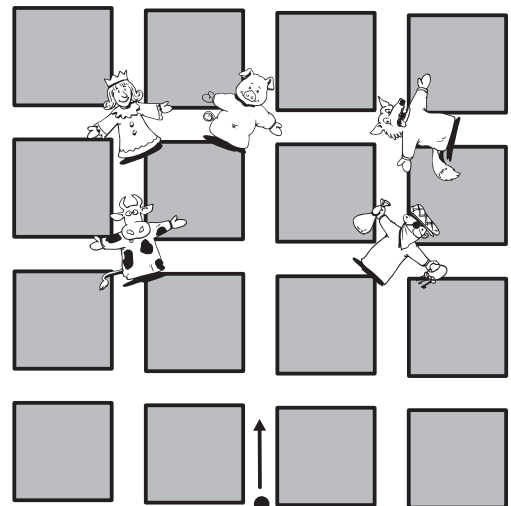
- A. 14 cm B. 15 cm C. 19 cm D. 23 cm E. 31 cm

11. In a shop you can buy oranges in three different boxes.
(see picture).
Fred wants to buy exactly 48 oranges.
What is the smallest number of boxes *Fred* will have to buy?



- A. 4 B. 5 C. 6 D. 7 E. 8

12. *Eve* stands on the dot and walks in the direction of the arrow.
At each crossing she turns right or left.
First she turns right.
Then left.
Then left again.
Then right.
Then left.
Finally she turns left.
Near which figure is *Eve* standing now?



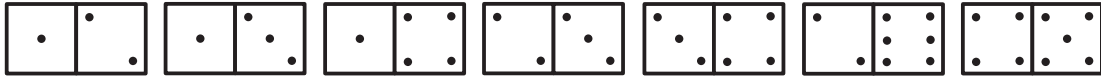
- A. B. C. D. E.

19. *Simon* counts the letters of his name, first forwards and then backwards, as is shown here. The number 17 corresponds to the letter S. Which letter corresponds to the number 99?

| S | I | M | O | N |
|----|----|-----|----|----|
| 1 | 2 | 3 | 4 | 5 |
| 9 | 8 | 7 | 6 | |
| | 10 | 11 | 12 | 13 |
| 17 | 16 | 15 | 14 | |
| | 18 | 19 | 20 | 21 |
| 25 | 24 | 23 | 22 | |
| | 26 | ... | | |

- A. S B. I C. M D. O E. N

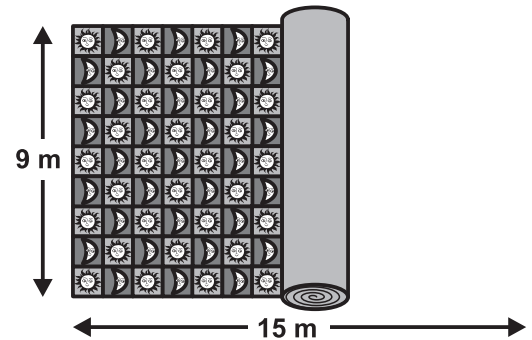
20. *Fred* has the dominoes you see below.



He wants to put them in a straight row according to the following 'domino-rule': two sides may be joined if they have the same number of dots. How many dominoes does the longest row he can make, consist of?

- A. 3 B. 4 C. 5 D. 6 E. 7

21. *Charles* buys a carpet that is 9 m wide and 15 m long. The carpet consists of squares with alternately a sun or a moon on it. The carpet is 9 squares wide. The carpet is being unrolled completely. Now, how many moons are there on the carpet?



- A. 60 B. 63 C. 65 D. 67 E. 68

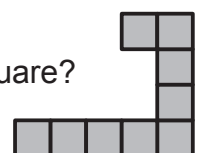
22. *Skippy* writes down several numbers. He only uses the digits 0 or 1, for instance the number 101. He adds the numbers and gets 2013 for outcome. It turns out to be impossible to get this outcome with fewer numbers. How many numbers did *Skippy* write down?

- A. 2 B. 3 C. 4 D. 5 E. 6

23. *Dana* sells ten glasses. All glasses have different prices: 1 euro, 2 euro, 3 euro, 4 euro, 5 euro, 6 euro, 7 euro, 8 euro, 9 euro, 10 euro. *Dana* has three boxes; these do not cost anything. In how many ways can *Dana* divide the glasses over three boxes in such a way that all three boxes are the same price?

- A. 1 B. 2 C. 3 D. 4 E. that is impossible

24. *Eve* has a lot of grey shapes as you can see here. How many of these shapes does she need to make a complete grey square?



- A. 3 B. 4 C. 6 D. 8 E. 16